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SCIENTIFIC NOTES.

Reports on Short Excursions made by the Geological Department of the University during the Autumn of 1891. By GEO. H. WILLIAMS and WM. B. CLARK.

The great importance for geological demonstration and training of the three divisions into which, from the point of view of its age, structure and topography, the State of Maryland naturally falls, has already been sufficiently explained in these *Circulars* (see No. 94, for Dec. 1891). In order to bring the students into personal contact with the characteristic features of these three provinces—mountain, plateau and plain—the instructors annually conduct a series of excursions, which are made an integral part of the geological work. To study more distant points, such as the formations of the Appalachians and of the Lower Chesapeake, an absence of several days is necessary. The extremely diversified geology in the immediate neighborhood of Baltimore, however, presents much of interest that can be examined in a single day, and it is to short excursions within this area that the Saturdays of the autumn are devoted.

Detailed accounts of the longer geological trips made under the auspices of the University during the past year have already been published (see *Circulars* No. 89, June 1891, and No. 94, Dec. 1891). In order to complete the record, it appears advisable to supplement these descriptions by brief notices of the less extended excursions made in the course of the past autumn.

The boundary line between the crystalline rocks of Archaean age, which compose the eastern half of the Piedmont Plateau, and the overlying Coastal Plain deposits, runs through the city of Baltimore, so that favorable localities for the study of both of these provinces are easily accessible. The short trips which have been made into the former region were conducted by Prof. Williams and those into the Coastal Plain by Dr. Clark. The following descriptions of the seven excursions made during the past fall have been prepared in each case by the particular instructor in charge.

FIRST EXCURSION, Saturday, October 10th, to Round Bay, Severn River, Anne Arundel County; conducted by Dr. Clark. The object of the first excursion was to examine the structure and stratigraphical sequence of the deposits that constitute the Coastal Plain. No locality perhaps better illustrates these points than the Severn River along whose banks for several miles stretches a section of Potomac, Cretaceous and Eocene strata. The marked diversity in color of the several formations makes it possible to determine sharply their boundaries, while the slight seaward dip of 25–30 feet in the mile, though imperceptible when viewed near at hand, may be seen to great advantage from the middle of the stream. The level country which characterizes the region at a distance from the banks is deeply scored by the tributaries that enter the Severn, so that the continuity of the section is frequently interrupted.

Potomac.—The Potomac, the lowest member of the Coastal Plain series, forms largely the cliffs above Round Bay and appears also at the base of the first bluff below. It is characterized by alternating beds of light colored clays and sands, the latter cross-bedded and frequently consolidated from the deposition of hydrous iron oxide. The clay at certain points, especially on the south bank, yields great numbers of fossil leaves and twigs that at times render the beds dark in color. The sand is economically valuable and is shipped in large quantities from several points above Round Bay. The opinions of geologists vary as to whether the Potomac formation should be referred to the Jurassic or the Cretaceous. The evidence on this point afforded by the vertebrate and plant remains is conflicting, the former pointing to the Jurassic, the latter to the Cretaceous.

Cretaceous (Severn of Darton).—The Cretaceous proper overlies the Potomac, capping the first cliff above Round Bay but reaching its full development in the bluffs below and on the south bank of the river. The deposits are dark, frequently nearly black, micaceous sands that are often argillaceous and indistinctly stratified. Molluscan fossils, including characteristic Cretaceous types of ammonites, lamellibranchs and gasteropods, are numerous.

Eocene (Pamunkey of Darton).—The Eocene overlies the Cretaceous, capping the highest bluffs. The strata are composed in this region of a red ferruginous sand, containing numerous layers of iron-stone. The deposits are undoubtedly an oxydized green sand. On Mount Misery, a slight eminence to the north-east of Round Bay, specimens of *Ostrea compressirostra* and *Cardita planicosta* are common.

Pleistocene.—The Pleistocene, so common as a superficial deposit over much of the Coastal Plain, is sparsely represented in this region.

SECOND EXCURSION, Saturday, October 17, to Lorelei and Big Gunpowder, Baltimore County; conducted by Dr. Clark. The object of the second excursion was to examine the line of contact between the crystalline rocks of the Piedmont Plateau and the unconsolidated sediments of the Coastal Plain.

Crystalline Rocks.—Some remarkably interesting structural features are afforded by the crystalline rocks of this area. The dark colored gabbro-diorite above the B. & O. R. R. bridge, at Big Gunpowder station, is seamed with innumerable dykes of granite, which appear to have penetrated the former mainly along its cleavage planes, thus forming a sort of "injection gneiss." This rock was subsequently crumpled in a very complicated manner, as may be seen along the river bank just west of the station. The extensive weathering to which the gabbro has been subjected, when protected from erosion so that its effect may be estimated, is seen in the railroad cut between Big Gunpowder and Lorelei, where a thickness of six or eight feet has been so completely changed as to render its separation difficult at first sight from the Potomac clays of the vicinity. Closer examination reveals the original structure of the crystalline rock still preserved in the thoroughly decomposed residue. Large knobs of crystalline rock project in places (one was examined north of the station of Lorelei) nearly to the level of the highest hills, which indicates an irregularly eroded surface at the time of the deposition of the Coastal Plain sediments, that to-day cover the eastern border of the crystalline area.

Potomac.—Overlying the crystalline rocks are the gravels, sands and clays of the Potomac, that have been extensively denuded by the Gunpowder River and its numerous branches. This uneven character added to the irregular surface of the crystalline rocks affords a very sinuous line of contact and frequently detached areas occur that cap the higher levels to the west of their common boundary. The deposits are in the main light in color, generally red or yellow, the clays presenting a variegated appearance except at one or two points, where, due to lignitic accumulations, they are very dark. Another feature quite prominent in the cutting below Lorelei is the secondary deposition of hydrous iron oxide at various angles obliquely to the bedding. In post-Potomac times extensive denudation left a very irregular surface for deposition during subsequent submergences.

Pleistocene.—Overlying the Potomac and in some places the crystalline rocks directly is the Pleistocene that is composed of loam, sand, gravel and transported boulders. The cutting below Lorelei affords one of the best sections to be found anywhere in the vicinity of Baltimore of the contact between Potomac and Pleistocene. The irregular line of contact, at one point in the cutting reaching nearly to its top, at another disappearing below the level of the railroad, is very distinct. A striking feature in the structure of the beds is the extensive cross-bedding that occurs in the sand strata in the lower portion of the Lorelei cut. The surface of the country in this area presents broad level patches that have, however, been extensively denuded since the deposition of the Pleistocene sediments.

Third Excursion, October 24, to Curtis Bay region, Anne Arundel County; conducted by Dr. Clark.—The object of the third excursion was to still further examine the relations of the Potomac and Pleistocene, and to gain a wider knowledge of the topography of the Coastal Plain of Maryland. The level topped ridges that lie to the south of Baltimore on the right bank of the Patapsco River exhibit a fragment of that ancient sea-floor to which the name of Coastal Plain has been given. The streams have cut into and scored its surface, leaving here and there, between their various channels, level patches of similar elevation, which proves their former continuity. From an isolated hill that stands out prominently on the west bank of Curtis Creek, the level topped plateau to the north and west is seen, and the broad and deep valleys of erosion occasioned by the streams entering the Patapsco from the south.

To the east of Curtis Bay, skirting the south bank of the Patapsco to Hollins Point, are several points of contact between the Potomac and Pleistocene. Near Hollins Point the brilliantly colored clays of the Potomac stretch for several hundred feet along the base of the bluff. Overlying them unconformably are the sands and loam of the Pleistocene, which here form part of a low terrace of Columbia date, while the higher lying gravels on the hill in the rear of the Marine Hospital have been referred to the Lafayette (earlier called Appomattox by McGee) formation.

Fourth Excursion, Saturday, October 31st, to Marriottsville on the B. & O. R. R., (main stem), Howard Co., Md,. conducted by Dr. Williams.

This locality was selected because it displays within easy walking distance a great variety of the ancient crystalline rocks of the Piedmont Plateau. The station is in a narrow valley, transverse to the line of the railroad, which is caused by a thin band of white crystalline limestone or marble. This is well exposed in several quarries a few rods south. Here the bedding of the rock and its present dip and strike are well seen in the bands of brown mica (phlogopite) which traverse it. On the lower surface of some projecting ledges of the marble remarkably fine arborescent incrustations of white augite (now wholly paramorphosed to fibrous white hornblende) were observed. These represent former impurities in the limestone which have subsequently crystallized within it, and later still been exposed by the removal of the easily soluble marble. In the stream bed below these quarries, slabs of the tourmaliniferous quartz-schist were found, indicating its presence immediately below the limestone, which is its normal position.

From Marriottsville the party walked northward along the road to the iron bridge across the North Branch of the Patapsco. Here the limestone belt, which is apparently not continuous all the way from Marriottsville, again appears and produces a narrow flat valley. The marble is here cut by a dyke of eruptive granite which has produced noticeable contact metamorphism along its edges.

From this point the walk was continued up the stream over the gneiss, until, by an ascent of the hill on the west side of the river, the party was brought within an area of intrusive gabbro, pyroxenite and peridotite. This belt of the ultra-basic eruptive rocks of central Maryland stretches in the direction of the prevailing strike (NNE.–SSW.) from "Soldiers Delight," where it is broadest, in a constantly narrowing band through Howard and Montgomery counties to the Potomac. It crosses the west branch of the Patapsco between Gorsuch's switch and Henryton. Near the northern end of this belt and again farther south in Montgomery county, the rock was principally peridotite, which by its alteration has produced serpentine rich in chromite. The central part of the area, however, which was visited on this excursion is more acid and consists mainly of pyroxenite (websterite) and its feldspathic facies (gabbro). Both of these rocks have been extensively altered, the former producing steatite and the latter gabbro-diorite (uralite-gabbro). At the edge of this belt chloritic rocks are extensively developed apparently as the result of contact metamorphism in the adjoining gneisses.

The party examined the admirable section across this belt exposed by Piney Run, a small tributary which joins the Patapsco from the northwest at Marriottsville. Near its western limit on this run the rock is wholly changed to steatite and is extensively quarried by the Maryland Soapstone Company. Farther east the rock becomes somewhat feldspathic but throughout it affords admirable specimens for the tracing out of every successive phase of alteration. The party returned by train from Marriottsville late in the afternoon.

Fifth Excursion, Saturday, Nov. 7, to Fort Washington, Potomac River, Prince George county; conducted by Dr. Clark.

The object of the fifth excursion was to examine a second section of the Coastal Plain series and more particularly to see the green-sand phase of the Eocene with its characteristic fossils.

The Fort Washington section is one of the most interesting of the Coastal Plain and has been frequently referred to by writers on the geology of Maryland. A section of the bluff below the fort just at the mouth of Piscataway Creek is given below.

PLEISTOCENE.	Coarse gravel.	8 feet.
EOCENE.	Red sand with casts of *Turritella Mortoni*, *Dosiniopsis Meekii*, *Cytherea ovata*, *Crassatella sp.*, *Ostrea sp.*	12 feet.
CRETACEOUS.	Light, variegated sands, slightly glauconitic........10 feet. Dark, micaceous sand, with *Cyprimeria densata*, *Crassatella vadosa*, *Cucullaea vulgaris*, *etc*........10 feet.	20 feet.
POTOMAC.	Variegated clay, slightly lignitic on upper surface, with layers of ironstone.	55 feet.

Fine exposures of the Eocene are found in the ravine behind the barracks and in the upper portions of the first run entering Swan Creek from the south. In the latter locality the Eocene affords a thick section of fossilferous beds that abound in *Ostrea compressirostra* in the lower part, *Cucullaea gigantea* at a higher horizon, while near the top of the series is a well marked zone containing *Turritella Mortoni*. *Cardita planicosta* is also found here. The lower horizons are composed of dark green-sand, at times argillaceous; the upper of a lighter colored and more consolidated green-sand. The Eocene rests upon the Cretaceous, that at this point contains numerous fossils.

The level topped character of the ancient surface is distinctly exhibited in this vicinity, deeply cut into by the Potomac and its tributaries.

On the return, a visit was paid to the U. S. National Museum, where the geological collections were examined by the members of the party.

Sixth Excursion, Saturday, November 14th, walk along Jones Falls from Baltimore to Mt. Washington; conducted by Dr. Williams.

This route was selected for an afternoon's walk because of the unusual variety of crystalline formations which it displays within a comparatively short distance. The party was unusually large, numbering twenty-two persons, among whom was Professor Hans Reusch, Ph. D., Director of the Geological Survey of Norway.

Starting from the North Avenue Bridge, the three large gneiss quarries on the left bank of Jones Falls, opposite Druid Hill Park, were first visited.

The remarkably regular bedding and dip of the gneiss was observed, as well as its gradual passage through decomposition into the overlying soil. This gneiss is intersected by frequent veins or dykes of a pegmatite carrying a black mica (lepidomelane), and occasional rare minerals. The gneiss is often altered along certain planes, by which a variety of zeolites, epidote, siderite, barite, calcite, and other minerals have been produced. It is these which make the Jones Falls gneiss quarries a widely known mineral locality.

A continuation of the walk along the east side of the stream to the Mt. Vernon mills displayed the gneisses much contorted and cut by several huge dykes of muscovite-pegmatite. The new bridge from Druid Hill Park to Cedar Avenue is based upon one of these. At the Mt. Vernon mills the stream was crossed and the route continued along the N. C. R. R. track to Woodberry. Within this distance two tongues of hornblende gneiss, representing altered gabbro, were crossed.

Between Woodberry and Melvale stations a broad easterly extension of the main gabbro mass enabled the party to see this interesting eruptive rock in its typical development, as well as its massive alteration product, the gabbro-diorite. At Melvale another area of gneiss is encountered, beyond which the gabbro and its allied basic intrusives again appear and extend nearly to Mt. Washington. At the new station Cylburn, near the Belvidere Avenue bridge, the very basic intrusions are well developed. These are peridotites (lherzolites), more or less altered to serpentine, and are easily distinguished by their very rough weathering surfaces. Some beautiful instances of the alteration of these rocks may be seen on Belvidere Avenue, a short distance west of the bridge.

Seventh Excursion, Saturday, December 5th, to Linwood, Carroll Co., Md., conducted by Dr. Williams.

The previous Saturday excursions made during the fall into the Piedmont plain had allowed only of the examination of its eastern and most crystalline portion. This was because the distance which it was necessary to traverse before reaching the western or semi-crystalline portion of this region seemed too great, and the attendant expense more than what could be accomplished in a single day would warrant. These difficulties were however overcome through the courtesy of Mr. Griswold, General Passenger Agent of the Western Maryland railroad, who not only offered the party tickets to Linwood at greatly reduced rates, but also ordered the evening express to stop and pick up the excursionists at this station.

The geological work thus far accomplished in the Maryland Piedmont region indicates that it is divisible into two distinct portions, separated by a great time break. The western portion, between Westminster or Hood's Mills and the Monocacy river, is composed of rocks much less crystalline in their character than those in the eastern portion, near Baltimore. Instead of gneisses, marbles and quartzites, we have phyllites, limestones and sandstones. From their relations to the rocks of determined age farther west, it is supposed that these semi-crystalline formations represent the lowest part of the Palaeozoic series, while their only partially metamorphosed condition renders it not improbable that fossils may be found in them, which will place their age beyond a doubt.

Linwood Station on the Western Maryland railroad was known to be a locality where the general character of the semi-crystalline rocks was well displayed, and where, at the same time, the little altered nature of the limestone rendered a search for fossils particularly hopeful. Throughout the western portion of the Piedmont area the limestone is usually changed to a white compact marble, but at Linwood it retains its blue color almost as perfectly as in the Frederick valley.

Linwood was therefore selected as the locality for the last excursion of the fall, in the hope that many pairs of eyes might prove successful where one had failed. The start was made from Union Station at 8 a. m. and the destination reached two hours later. The openings in the blue and but slightly crystalline limestone north of the railroad were first examined. Those near the residence of Joel Haines were the most promising in appearance, and here a patient search was made for any indications of fossil remains, but without success. The slates adjoining the limestone on the west were next examined and a return made over them to the station. Then the party started again to examine the limestone quarries toward the east along the bank of Little Pipe Creek. Those of Thomas Spielmann are most interesting. They exhibit remarkable effects of folding, faulting and crushing in the limestone accompanied by some recrystallization. Traces of zincblende and galena were also noticed here, but, as at the other localities, no traces of fossils could be detected. The occurrences of slate near these quarries present instructive effects of folding cleavage and of pseudo-dip and strike.

After the return of the main party, the region south of Linwood, as far as McKinstry's Mills, was visited by some, and the limestones there found to be contracted into a much narrower belt and to be proportionately more metamorphosed and crystalline. They were indeed altered to compact marbles—either pure white, or veined with red.

Ethopoiia. A Rhetorical Study of the Types of Character in the Orations of Lysias.

By William Levering Devries.

(Abstract of a paper read before the University Philological Association, November 20, 1891.)

Ethopoiia is the dramatic delineation of character, especially as displayed in speeches written for court by a speech-writer who has studied and depicted in the thought, language, and composition (σύνθεσις) of the oration, the personality of the client who delivers the speech. The value of Ethopoiia in the Attic court was as a means of persuasion. The jury, made up by lot of all classes of citizens, was influenced by its opinion of the moral worth of the defendant or plaintiff rather than by the law, and hence it became the duty of the speech-writer to place in the mouth of his client words and expressions that would produce the effect of innocence and true worth without any overt statement of the same. In this delicate task Lysias has excelled all others, as Dionysius of Halicarnassus has stated in his tract on Lysias; for this orator had an unequalled insight into human nature in all its varied aspects. In the characters a number of distinct types are clearly depicted, although the general tone is that of the average man.

This use of Ethopoiia has been the cause of many of the distinctive traits of the Lysianic style: simple and free structure of the sentence, pure Attic and plain diction, clear and terse expression, etc. In comparing types of character, direct comparison is not to be made with those of the comic poets or Theophrastus; these had ridicule and satire in view, while the orator wished to persuade. Comparisons should be made rather with Homer, with Plato, with the tragic poets, especially the lawyer-poet, Euripides.

The patriotic man is the chief type in Lysias, and of these the foremost is Mantitheus of Or. 16, whose patriotism appears in his devotion to his various duties as a citizen. Straightforwardness, the special note of his character, appears in the frank and direct expression of his opinions, in his simple and unadorned language, and in the unpretentious method of composition. He does not hesitate to advert to his own merits, of which he is fully conscious; but he is never boastful or unduly bold; his behavior is the outcome of the natural pride of a brave man in duty well done. He is, therefore, far different from the *miles gloriosus*; he is a high-bred patriot, not a low-born, braggart, mercenary.

The speaker of Or. 17 is like Mantitheus in his disinterested patriotism, and in his simplicity and directness. This is shown by brevity, narration in finite verbs, large amount of hiatus, simple periods, absence of figures and of unusual words. The only rare word, εὔγνωστον, which, occurring twice in § 4, and taken in conjunction with ῥᾳδίως εὑρήσειν § 1, ῥᾴδιον εἰδέναι (γνῶναι) § 4, 7 is a mark of the simpleness and clearness of the points at issue.

More like Mantitheus is the speaker of Or. 21, as he shares with him his conscious pride as well as his patriotism and simpleness. In Or. 19 we have, as Mr. Jebb has pointed out, the steady, devoted Athenian of the old type in the father, and the adventurous patriot of the new school in Aristophanes, while the son, who delivers the orations, clings steadfastly to the good old ways of his father. With the father and son of this speech we may compare the speaker of Or. 7, and also the senator of Or. 31. Contrasts are noticeable in the speakers of Or. 21 and 26, the politician of Or. 25, Philon of Or. 31, Diogeiton of Or. 32. The public position of the speakers of Or. 22, 27, 28, 29, 30, as state prosecutors prevents the use of ethos.

The simple man is another frequent type in Lysias and Euphiletus, the injured husband of Or. 1, is the leading exponent of this trait. His simplicity appears especially in his direct and homely narrative, in his plain language, abounding in repetitions and other colloquial marks, and in the unadorned composition of the speech. Simplicity is also a mark of the speakers of Or. 7, 16, 17, 19 and 21, of Dionysius of Or. 13, and especially of the speaker of Or. 32—a speech very like Or. 1 in the use of ethos.

Cleverness is another trait of the Lysianic characters. Everyone remembers the low-born cripple of Or. 24, with all his drollery of thought and expression, his affected language in subtle imitation of his superiors. A contrast with him is the speaker of Or. 10, high-bred and high-spirited, but quite as clever as his low-born counterpart of Or. 24.

Other characters in Lysias besides this cripple exhibit various traits of low birth. Note Agoratus of Or. 13, Nicomachus of Or. 30, Pancleon of Or. 23, and Eratosthenes of Or. 1, the typical rake of the later Greek comedy.

In addition to Eratosthenes, the immoral type is to be found in the speakers of Or. 3 and 4. The sixth chief type in Lysias is youthfulness, which is noticeable in the speakers of Or. 16, 18, 19, and, in several of its least pleasing aspects, in Eratosthenes the rake.

Lysias has not left us without typical women as well as men. In Or. 1 we have the unfaithful wife, weak and cunning; the servile maid servant, the conventional *meretrix*, so familiar in the Roman comedy, and her devoted old hag of a servant woman. A genuine, bawling baby is a special property of this oration, whose scene is so crowded with typical characters. Or. 32 affords us a pleasing contrast in the devoted mother, who will go to any length for the sake of her children.

Such is a brief summary of the types of character in Lysias' orations. The points adverted to here are fully substantiated by a detailed study of the thought, language and composition of each oration.

Locative Expressions in the Attic Orators. By J. H. T. Main.

(Abstract of a paper read before the University Philological Association, October 16, 1891.)

The various statements that have been made regarding the use made of locative adverbs in proper names are unsatisfactory and vague, not to say misleading. The uncertainty that has been felt regarding them is an inheritance from antiquity itself, and though the questions involved are of sufficient importance to repay consideration, no systematic effort seems to have been made to bring together the material necessary for the drawing of safe and reasonably certain conclusions.

This study is made for the purpose of arriving at some definite understanding regarding these forms, and starts out with a consideration of those that are found in the Attic orators.

The forms considered include the following:

(1) Words having the endings, -θεν, -δε and -ζε.

(2) Words having the endings, -ησι, -ασι.

(3) Words having the ending, -οι.

(4) Datives, when used as locative adverbs in such words as Ἐλευσῖνι, Μαραθῶνι, Μελίτῃ and Σαλαμῖνι.

The second part of this study, which for the present is held in reserve, will deal with the comparative frequency of the locative and the corresponding prepositional phrase.

The statistic accompanying this study shows that in Antiphon there are no locatives of the kind under consideration. The same is true of Deinarchus. The largest number proportionally is found in Andocides, next to whom comes Lysias. In Isocrates the number is very small. Demosthenes entire comes next to Lysias, but this is due to the abnormal accumulation of forms in three or four speeches.

That Andocides used the locative from choice is shown by the fact that he never employs the prepositional equivalent, though he might have done so without violating Attic requirements, but no stress is to be laid on the suggestion that the preference shown by this orator for the locatives is due to the more colloquial character of his style, as the facts in general seem to militate against this view.

The absence of the locative from Antiphon is devoid of significance. There are no locatives, it is true; but neither are there any phrases that could be turned into locatives without passing the limits of good Attic.

For Deinarchus the case is different. Where there is opportunity for choice the selection made in every case is favorable to the preposition. For example, he has ἐν Θήβαις but not Θήβησι; εἰς Μέγαρα, but not Μέγαράδε; ἐν Ὀλυμπίᾳ, but not Ὀλυμπίασι.

Isocrates may be compared to Antiphon. There are but two or three expressions in him that can be turned into creditable locatives. The two represent merely an accidental condition.

The extremes of usage are represented on the one hand by Andocides and on the other by Deinarchus. An examination of the material lying between reveals the interesting fact that there is a clearly discernible advance from the locative to the prepositional type. Lysias, Isocrates and Isaeus gradually move toward the preposition; Demosthenes and his contemporaries show little fondness for the locative.

The fact that in Demosthenes the references to Athens comprise nearly the entire number of locatives, does not indicate an increasing use of these forms; the condition is dependent altogether upon local causes. A study of the speeches numbered XXXIV, XXXV, LVI and LIX in the Demosthenean corpus, shows a great accumulation of such references—a condition resulting necessarily from the circumstances. The same words appear again and again until the formal conditions of contract and agreement are completely set forth. The legal technicalities with which these speeches abound are, moreover, naturally productive of the hard, unyielding locative. It is consequently absurd to point to these speeches as having any bearing upon the general question of usage, from the point of view of numbers at least.

The locative endings betoken familiarity and were attached only to such terms as were in common use. In keeping with this and with the legal and technical uses to which they were applied, is the well known fact that these endings showed an especial affinity for the names of certain Attic demes, for example: Κεφαλῆθεν, Ἀλωπεκῆθεν, Μαραθῶνάδε, etc.

Beyond the confines of Attica but seven places are mentioned in the orators that show any traces of these endings. These were familiar names, and the extension of this usage to them is clearly in harmony with the principles underlying its application to names of places within its borders.

The treatment of the names of places where temples were or where the national festivals were held, was by no means uniform. To words of this sort on general principles the locative endings would most naturally attach themselves. The rights of the locative in this sphere, whatever they may have been, were by no means always respected, and no principle can be discerned by which these endings were adopted in one case and rejected or used sparingly in another.

The dominance of the 'where' forms maintains itself for the whole body of Greek oratory. This is conclusive proof that this relation is the more easy and natural one. The same fact is pointed to by the proportionally larger number of words found in this relation.

In general the observations made show that the locative played no very important part in the Greek language as it appears in literature. The part it performed in colloquial speech must remain a matter of conjecture. In the Iliad and the Odyssey there are barely a score of proper names in -θεν. Neither does Homer treat the dative as a locative with any particular marks of favor. Herodotus, it is worth noticing, does not use proper names with locative endings. From Thucydides, however, they are not entirely absent, but the preference for the prepositional form is pronounced. The conditions everywhere point in essentially the same direction.

On the So-called Songs of Degrees. By Daniel G. Stevens, Jr.

(An abstract of a paper read before the University Philological Association, December 18, 1891.)

Among the several minor collections of Psalms which compose the Psalter is a small group of fifteen songs, Ps. 120–134 inclusive. In the King James' Version each of these Psalms bears the vague and unsatisfactory title, "A Song of Degrees." The Septuagint and Jerome translate the Hebrew designation שִׁיר הַמַּעֲלוֹת by ᾠδὴ τῶν ἀναβαθμῶν and canticum graduum; and in the Talmud the Psalms are explained as intended to be sung on the steps of the Temple.

But many exegetes have regarded these Psalms as "Pilgrim Songs," to be sung on the Feast Journeys.[1] The most reasonable theory, however, would seem to be this, that these Psalms are Songs of the Ascent, or Return, from Babylon to Jerusalem at the close of the exile.

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[1] *Cf.* T. K. Cheyne, *The Origin and Religious Contents of the Psalter* (London, 1891), pp. 51–55.

The Hebrew title exhibits a rare phenomenon in the syntax of that language; for in שִׁיר הַמַּעֲלוֹת, which is the plural of a compound idea, the plural is indicated by the ending in the nomen rectum only.[2]

Expressed according to more ordinary Hebrew syntactical usages the full title would be שִׁירֵי הַמַּעֲלָה מִבָּבֶל = "The Songs of the Ascent from Babylon."[3] Whatever other explanation it may be possible to offer for individual songs of the group, they may all be explained as referring to this important event in Jewish history.

The following treatment of Ps. CXXI will serve to illustrate the application of this explanation to the entire group of Songs.

Ps. CXXI appears to refer to events which preceded the Return.

In 537 B. C., sixty years after the taking of Jerusalem by Nebuchadnezzar, Cyrus, the Persian, having overthrown the Babylonian Empire, gave permission to the Jews to return and to rebuild their city and its Temple. But many of the Jews were not desirous of returning. For Josephus (Antt. XI, I. 3) says many of them remained in Babylon, being unwilling to leave their possessions. Those who went up were the priests, the Levites, the pious enthusiasts and the poor. The long and arduous journey served as an excuse to the faithless and unbelieving, who preferred to enjoy the comforts of life at Babylon. Ps. CXXI seems to have been written in answer to this plea of the sceptics and to encourage the Jews to return. The Psalm reads as follows:

1. *I lift up mine eyes to the hills; whence cometh my help?*
2. *My help cometh from the Lord, who made heaven and earth.*
3. *May he not suffer thy foot to stumble; may thy keeper not slumber!*
4. *Behold, he that keepeth Israel will neither slumber nor sleep.*
5. *The Lord is thy keeper; the Lord is thy shade upon thy right hand.*
6. *The sun will not smite thee by day nor the moon by night.*
7. *The Lord will keep thee from all evil; he will keep thy life.*
8. *The Lord will keep thy going out and thy coming in, from now even forevermore.*

There are two voices heard in the opening verses of this Psalm. The poet personates first a sceptic, then a believing Jew. With vs. 5 a chorus begins, or an address full of comfort and reassurance to the congregation. The Psalm may be paraphrased thus:

(The sceptic speaks:) *I am lifting up mine eyes longingly toward the hills of Jerusalem; but whence comes help for the long and toilsome journey?* (The believer replies:) *My help cometh from the Lord, who made heaven and earth; surely the great Creator of the universe is able to bring us safely to Jerusalem.* (Sneeringly the sceptic remarks:) *I hope he will keep you from stumbling on the way, and I hope your keeper will not fall asleep.* *Behold* (says the believer) *he who keepeth Israel shall neither slumber nor sleep.* (Then the chorus:) *The Lord, he is thy keeper; He is thy protection, upon him thou mayest depend. Neither the scorching heat of the day, nor the chilling frosts of the night will harm thee. He will keep thee not only from these dreaded evils but from all evil. Thy life is safe in his hands. He will ensure thy departure from Babylon and thy safe arrival in Jerusalem, and not only that, but the beginning and end of all thy undertakings from now even forevermore.*

On the Trading House or Factory System among the Indians. By J. A. James.

(An abstract of a paper read before the University Historical Seminary December 4 1891.)

The system of trading houses, under the control of the general government, obtained between the years 1796 and 1822. Through them the United States government entered the field as a private trader and sought the Indian trade west of the Alleghany mountains. Through his knowledge of these earlier institutions, Benjamin Franklin doubtless conceived the plan for a governmental control of the entire Indian trade system. In a letter referring to his plan of union of 1754 he says: "The friendship of the Indians is by every means to be secured. In the furtherance of this end public trading houses should be established, in suitable places, all along the frontiers. They would certainly have a good effect towards regulating the private trade and preventing the impositions of the private traders." There were public trading houses in some of the colonies.

The influence which the English exerted over the Indian tribes of the northwest, offered an additional incentive to the United States government. The search for some plan which might neutralize the influence of the English and gain the friendship of the Indians, led to the adoption of Franklin's plan, which was strongly favored by the prominent men of the time.

Washington, in each of his messages, urged upon Congress the necessity for such a system—a system which should be conducted without fraud, without extortion and with constant and plentiful supplies.

Congress appropriated in 1796 the sum of $150,000 to be expended in this trade by commissioners appointed by the president. There was to be no profit to the government, except enough to meet expenses. Through the influence of Jefferson and Calhoun the time originally stated was extended.

At the close of the year 1811 there had been appropriated in all $300,000, and ten factories, as they were called, had been established. These were located among the Cherokees and Choctaws, on the Mississippi river, and among the Indians of the Northwest.

As early as the year 1812, the plan began to show its weaknesses. The causes for failure became more notable and finally in 1822, through the influence of Senator Benton, the system was abandoned.

The English had a more effective Indian department than the United States. No agent was appointed by the British government who could not speak the language of the tribe he was to deal with. Many of the agents under the United States had never seen an Indian. They were uninterested in their duties, and left their performance to inferior officers. The Indians at Malden received $100,000 in presents, from the English, during a single year. They lost confidence in a government that could give them nothing. The private traders gave credit; the superintendents were forbidden to do so. United States government officers too often made bargains advantageous to themselves, either through inordinate profits or by the offer of inferior goods for trade.

This system which promised so much was far from effecting its object. The last few years of its continuance showed an annual loss to the government of $40,000.

An Illustration of the Direct Computation of an Invariant. By C. H. Chapman.

(Abstract of a paper read before the University Mathematical Seminary, November 18, 1891.)

On $ax^2 + 2bxy + cy^2$ effect the linear transformation

$$X = \lambda x + \mu y$$
$$Y = \lambda_1 x + \mu_1 y.$$

Define an invariant as

$$\phi(a_1, b_1, c_1) = g^w \phi(a, b, c),$$

g being the determinant $\begin{vmatrix} \lambda & \mu \\ \lambda_1 & \mu_1 \end{vmatrix}$.

We can get a differential equation by assigning particular values to λ, μ, etc.

Put
$$\lambda^2 = 1 \qquad \mu^2 = 0$$
$$\lambda_1{}^2 = n \qquad \mu_1{}^2 = 1$$

Computing a_1, b_1, c_1 and substituting in the defining equation

$$\phi(a_1, b_1, c_1) \equiv \phi(a, 2\sqrt{n}a + b, na + \sqrt{n}b + c) = \phi(abc),$$

Developing

$$\phi(a, b, c) + 2\sqrt{n}a\frac{\partial\phi}{\partial b} + (na + \sqrt{n}b)\frac{\partial\phi}{\partial c} + \ldots\ldots = \phi(a, b, c)$$

$$\therefore \quad 2\sqrt{n}a\frac{\partial\phi}{\partial b} + (na + \sqrt{n}b)\frac{\partial\phi}{\partial c} + \ldots\ldots = 0.$$

Then since the coefficients of the different powers of n are each equal to zero,

$$2b\frac{\partial\phi}{\partial a} + c\frac{\partial\phi}{\partial b} = 0$$

$$2a\frac{\partial\phi}{\partial a} + b\frac{\partial\phi}{\partial b} - k\phi = 0,$$

which, together with Euler's theorem for homogeneous functions and the equation for a total differential, give

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[2] *Cf.* Gesenius' *Hebrew Grammar*, 25th edition (Leipsic, 1889), § 124, 2 c.

[3] *Cf. Hebraica*, vol. II (Chicago, 1886), p. 98, n. 2.

$$\begin{vmatrix} 2a & b & 0 & k\phi \\ 2b & c & 0 & 0 \\ a & b & c & k\phi \\ da & db & dc & d\phi \end{vmatrix} = 0.$$

Expanding this total differential equation,

$$\frac{d\phi}{\phi} = \frac{k}{2} \frac{adc + cda - 2hdb}{ac - b^2}$$

Integrating

$$\phi = (ac - b^2)^{\frac{k}{2}}$$

The homogeneous cubic can be similarly treated.

A Fundamental Theorem of the θ Functions. By T. Craig.

(Abstract of a paper read before the University Mathematical Seminary, December 23, 1891.)

A demonstration was given of the relation

$$\begin{aligned} &\theta_1(x-a)\,\theta_1(x-b)\,\theta_1(y+z-a-b)\,\theta_1(y-z) \\ +&\theta_1(y-a)\,\theta_1(y-b)\,\theta_1(z+x-a-b)\,\theta_1(z-x) \\ +&\theta_1(z-a)\,\theta_1(z-b)\,\theta_1(x+y-a-b)\,\theta_1(x-y) = 0 \end{aligned}$$

by means of the theorem: that, the sum of the residues of a meromorphic doubly periodic function is zero.

CURRENT NOTES.

McCOY HALL.

At a meeting of the Trustees of the University, December 15, 1891, it was determined to proceed to construct an Academic Hall on the property belonging to the university, at the corner of Monument and Garden streets, running back to Little Ross street.

The trustees are enabled to take this important step by the gift of the late John W. McCoy, who made the university his residuary legatee. Sufficient funds have been received from his estate for the erection of a building which will furnish rooms for the classes in languages, history, and philosophy, with space for the present requirements of the library, and an assembly-room which will hold over six hundred persons. The trustees voted that the building should be known, in honor of the munificent donor, as McCoy Hall.

The piece of ground on which the new hall is to be constructed is 100 x 185 feet, and is now taken up with residences used for purposes of the university. Messrs. Baldwin and Pennington have been selected to draw up the plans for the building.

Gift to the University of the Medical Library of Professor Francis Donaldson, M. D.

Professor Francis Donaldson died in Baltimore on December 9, 1891. He was born in this city July 23, 1823. He was the son of John I. Donaldson, a leading banker. He received his medical degree at the University of Maryland in 1846. From 1863 to 1866 he was professor of materia medica in the Maryland College of Pharmacy, and in 1866 became professor of physiology and hygiene and clinical professor of diseases of the throat and chest in the University of Maryland. In 1880 he resigned his didactic chair and later was made emeritus clinical professor. He served as president of the Medical and Chirurgical Faculty of Maryland and of the American Climatological Association; he was a member of the American Association of Physicians and Surgeons and of the American Laryngological Association, a Fellow of the College of Physicians of Philadelphia, and a consulting physician of the Johns Hopkins Hospital. Dr. Donaldson was the author of many articles published in medical periodicals, principally on diseases of the heart, lungs, and throat. He married Miss Elizabeth Winchester, who survives him with five children.

His family have given to the University his valuable collection of medical books, consisting of over eight hundred volumes. These have now been received by the Library and are being catalogued and arranged.

The University of Edinburgh in June, 1891, conferred upon Professor Simon Newcomb the honorary degree of Doctor of Laws (*in absentia*). Professor Newcomb was also elected, in June, 1891, an Honorary Member of the Royal Institution of Great Britain.

The Baltimore Society of the Archæological Institute of America held its January meeting in the lecture-room of the Physical Laboratory on Tuesday evening, January 5, at 8 o'clock. Dr W. B. Scaife gave an account of a recent visit to the Peloponnesus, with stereopticon views, and Mr. Herbert Friedenwald, A. B., gave an account of the recently found Sidonian Sarcophagi.

ADDITIONS TO CHECK LIST OF STUDENTS.

(See *University Circulars*, Nos. 92 and 94.)

Graduate Students.

Bedford-Jones, Harold H. Brockville, Ont. A. M., Trinity University (Ont.). *Greek and Latin.* 917 McCulloh.

Chalmot, Guillaume J. L. de (F by C.) Baltimore. Ph. D., Göttingen. *Chemistry.* 10 W. Oliver.

Nauts, William B. Sewanee, Tenn. A. M., University of the South. *Latin and Greek.* 917 McCulloh.

Thomas, John B. Marion, Va. A. B., Emory and Henry College. *Mathematics.* 424 Courtland.

Thurlow, Rev. Harold. Baltimore. A. B., McGill University. *History and Politics.* Homestead.

Whitelock, W. Wallace. Baltimore. A. B., Johns Hopkins University. *History and Politics.* 1117 N. Charles.

Willis, Richard H. Fayetteville, Ark. A. B., Arkansas University. *English, etc.* 905 McCulloh.

Undergraduate Students.

Baldwin, Rignal W. Baltimore. (Baltimore City College.) *Jurisprudence.* 1615 Linden Av.

Briscoe, S. William. Baltimore. (Dr. R. Atkinson.) *Chemistry.* 104 W. Eager.

Ingram, James E., Jr. Arlington. Private Instruction. *Group VI.* Arlington.

The number of students now enrolled is 525 (315 graduate and 210 undergraduate students.)

UNIVERSITY SCHOLARSHIPS.

At a meeting of the Board of University Studies, January 6, University Scholarships were awarded to the gentlemen named below:

F. F. Almy (S. B., University of Nebraska). *Physics.*
B. S. Annis (A. M., Colby University). *Astronomy.*
M. Brandow (A. B., Rutgers College). *Greek.*
W. S. Elden (A. B., Bowdoin College). *Latin.*
H. M. Ferren (A. B., Western University of Pennsylvania). *German.*
H. S. Gane (A. B., Amherst College). *Geology.*
D. H. Holmes (A. M., Wesleyan University, Ohio). *Sanskrit.*
J. A. James (B. L., University of Wisconsin). *History.*
G. C. Keidel (A. B., Johns Hopkins University). *Romance Languages.*
E. P. Manning (A. B., Brown University). *Mathematics.*
L. S. Merriam (S. B., Vanderbilt University). *Political Economy.*
M. M. Metcalf (A. B., Oberlin College). *Biology.*
W. B. Shober (A. M., St. John's College, Md.) *Chemistry.*
M. B. Stubbs (A. M., Haverford College). *Chemistry.*
F. Tupper, Jr. (A. B., Charleston College). *English.*

Professor C. T. Winchester's lectures on English Poetry will be given on February 5, 8, 9, 11, 12, 15, 16, 18, 19.

It is expected that Professor R. C. Jebb, of Cambridge, England, will give the second course of Percy Turnbull Memorial Lectures on Poetry, beginning March 28.

SKETCH OF THE LIFE OF JOHN W. McCOY. 1821-1889.

Reprinted from "The Biographical Cyclopædia of Representative Men of Maryland and the District of Columbia."

The name of John W. McCoy, of Baltimore, will always be held in grateful remembrance by the Johns Hopkins University. He was the careful and constant observer of its work, and upon his death he was found to be a great benefactor.

As is elsewhere stated, the Trustees of the University have decided to undertake the construction of a new academic building, to be known as McCoy Hall. This they are enabled to do by the munificent gift by Mr. McCoy of his residuary estate to the University.

The re-arrangement of the books which were given by him, and the re-opening of his library, have also awakened a fresh interest in the life of this generous man. The readers of these *Circulars* will doubtless be glad to see the following sketch, which originally appeared in "The Biographical Cyclopædia of Representative Men of Maryland and the District of Columbia," in 1879.

John W. McCoy was born in the city of Baltimore, April 2, 1821. His family has been identified with the city from the close of the last century; his mother, Sarah Williamson, having been born in Baltimore, December 20, 1800, when the city had only 26,000 inhabitants. His father, Stephen McCoy, born at Basking Ridge, New Jersey, February 25, 1787, marched in his twenty-seventh year from Lancaster, Pennsylvania, as a volunteer soldier for the defence of Baltimore, when assailed by the British in 1814, and remained here a citizen until his death, February 12, 1873; Sarah Williamson McCoy, his wife, surviving him a short time and dying May 26, 1874. John W. McCoy, the subject of this sketch has himself been identified with Baltimore from his birth. He was educated in that city, completing his course at Baltimore College, a department of the University of Maryland. Without the benefit of fortune, but with a solid education, quick faculties, and an acute insight into men and affairs, coupled with untiring industry, he entered the working world at an early age, commencing his career in the office of a popular weekly newspaper. For many years he retained that kind of connection, having through boyhood and up to his middle manhood, grown through all the grades of newspaper service, from a junior clerk or accountant to a writer of editorials. During the many years of this career, amid a taxing occupation, he found, or rather took time for continuous and systematic study; devoting some hours of every day or every night, without fail, to enlarging his acquaintance with history, philosophy, natural science, and belles-lettres. The history of art and the fine arts in all their manifestations have long been with him attractive subjects of continuous observation and study. Mr. McCoy was, up to its dissolution, for many years one of the Board of Governors of the Allston Club, an association organized to create a social life in sympathy with art and letters; and has been one of the Governors of the Athenæum Club since its foundation in 1877. For thirty-three years he has been a member of the Mercantile Library Association, and was for twelve years continuously elected to its Board of Government, until his absence from the city during the war that began in 1861. With little leisure for club life, or indeed for social life in any form, Mr. McCoy has ever since boyhood taken but scant recreation. An hour or two's walk with a pleasant friend, or alone amid the varied aspects of man and nature, have been his simple and delightful restoratives. Work and study, day and night (with never more than a few hours for sleep), made the routine of his life up to his mature manhood. Having always been an earnest thinker on our social life, especially on the various future of the several social ranks in great cities, and with an instinctive sympathy for the helpless, Mr. McCoy was among the earliest members and officers of the "Baltimore Association for the Improvement of the Condition of the Poor." Before the period when paid agents were employed to do its work, Mr. McCoy was, for several years, a voluntary unpaid visitor to the poor, devoting personally five or six hours of every day during the winter months to visiting really thousands of them at their homes, where he was brought face to face with every form of distress and destitution. He has often said that no part of his life was remembered by him with the same gladness as these years he devoted to sympathetic counsel with the unfortunate, and as a careful distributor of what the generous public had provided for their help. Apart from his duty as an unpaid visitor to the poor, Mr. McCoy rendered a specially notable service to the cause of true charity, and to the association which in this city is organized as its channel, by openly opposing a scheme that was popularized during one or two winters, in which contributions were courted by open publication, not only of the givers' names, but of the names and residences of those whose hard lot compelled them to accept the public bounty. The one end of the scheme would have been to utterly destroy the self-respect of thousands of honest but impoverished people, sick men, sick women, and families anxious for work, but in winter nigh to famishing for want of it. This cruel publication of their names and needs stigmatized the best of them practically as paupers. Public sympathy, however, was stirred by these details; thoughtless contributors were gratified, though the poor whom they wished to help were immeasurably hurt. The association that made no such publication, but had careful and sympathetic men to do its work in privacy and with knowledge, found its funds rapidly declining and its means of solid usefulness coming to an end. In this crisis Mr. McCoy devoted himself to sustaining the association in spite of temporary popular clamor, and by writing and publishing various rational and warm appeals in the newspapers and in pamphlets, to which a broad distribution was given time after time for several years, the judicious public came to clearly understand the noble service the Poor Association was rendering, so that its funds were as steadily replenished as help to suffering had depleted them, until now the association is a fixed institution in the city, and year by year, summer and winter, is engaged quietly, but effectively, in its beneficent work. Mr. McCoy has for thirty odd years kept his connection with it, and has long been one of its Vice-Presidents. In 1859 Mr. McCoy was made President of two mining companies working for metals in North Carolina, and having their business offices in Baltimore. When the war broke out he had the option of staying quietly at home and abandoning the valuable property of his companies, or of leaving home to develop and protect, upon the spot, in North Carolina, the interests of his friends. His decision was made at once, and severing himself four years from home, he did his simple duty in standing by his work and taking the fortunes of the Confederacy. Without funds, and with one hundred and fifty men in his employ, with the market closed against the products of his mines, he yet went through the four years and more, kept the mines actively alive until the close of the war, paid all his company's debts, and brought to market a material surplus for its treasury. To do this Mr. McCoy had to really *create* all his means. He made all the iron, of which his need was large, from the ore; built a dam on Deep River for a water-power, working himself day and night in the water, guiding his negro hands; established furnaces, and trained his simple workmen to make wrought iron directly from the ore, which they did in large quantities, both for mine consumption and for sale. In the mines gunpowder in large quantities was a daily necessary for blasting. But when the war had gone on a few months powder could not be had at any price. Mr. McCoy, without money resources, at once determined not to stop the mine, but to *make* the necessary powder. To do this he had the dry earth hauled from under every human habitation for miles around; from it by rude, but effective apparatus, he leached the nitrous salts and crystallized them into pure saltpetre. He excavated furnace chambers in the solid rock, and here, with the rudest utensils, distilled sulphur by the ton from the ores of the region; burnt charcoal; and finally rigged up a simple powder-mill that, with negro hands only to manage it, under his guidance, made blasting powder, that through four years tore down thousands of tons of rock and ore. The result was that when the war ended this was the only copper mine alive within the limits of the late Confederacy. Mr. McCoy not only made, without financial capital and without any experienced help, wrought iron directly from the ore, but forged bolts, bars, wheel tires, and the innumerable forms of iron necessary to the conduct of a large mining establishment, and made bloom of wrought iron for the market. He made copperas also from the same ore from which he got bluestone, sulphur, and metallic copper; and it was from the barter of these products, necessary all over the South, that he got corn and meat to feed the one hundred and fifty men and thirty horses that depended on him for sustenance. He had no foreman or practical guide to help him in any one of these varied manufactures; he had never himself seen any of these articles made, and his sole guide was his previously acquired practical scientific knowledge that his determined energy applied with complete success under the most unpromising conditions. When the war ended, in 1865, Mr. McCoy returned to Baltimore, closed his mining connection, and became a partner in the well-known commercial house of W. T. Walters & Co. He is still a member of that firm, but devotes much of his time to the conduct of the *Daily Evening Bulletin*, a journal which he, in connection with a few friends, originated in 1876, and which rapidly attained and has since steadily kept the character of a first class newspaper—able, fearless, honorable, judicious, and conservative. Since its origin, in 1876, Mr. McCoy has been a member of the Harbor Board of Baltimore, where he is chairman of its only standing committee. He has thus had a special share in the guidance of the enormous work of excavation which, under the immediate direction of a scientific engineer, has, by the removal of several millions of cubic yards of deposit, converted what was hitherto the shallow estuary of a decaying village into the deep and spacious harbor of a great commercial city. Without this immense work, already done so fully and with such close economy, the enormous growth of the sea-borne trade in breadstuffs, other provisions and petroleum, which has marked the last few years in Baltimore, would have been simply impossible. Mr. McCoy is also in the administration of the State Insane Asylum at Spring Grove, having been appointed by the Governor some years ago to that important trust. His colleagues there have made him chairman of its chief committee, where the daily administration, including shelter, nurture, care and medication of upwards of three hundred lunatic patients, and the control of more than forty servants come under the special care of his Executive Committee. Amid a long life of almost incessant labor, Mr. McCoy has found time to keep alive and cultivate an inborn love of art. Previously familiar in detail with all worthy art productions of our country, and also with the best foreign work that had been brought here, in 1871 Mr. McCoy made an extended tour in Europe, visiting and carefully observing the great collections at the chief art centres of the world, from London to Rome. He gave also close attention to social matters, modes of living, and methods of economical production. He had long been known as the special friend, defender, and helper of our home artists, who, amid neglect and overborne by unobservant and unreasoning fashion, had struggled unrewarded and, indeed, almost unknown, year after year in honest and able endeavor, most of them to produce work that should compel the admiration of their careless fellow-citizens. It is now a settled fact that Hovenden, Quartley and Jones are artists of high rank, and steadily rising to still higher places. Mr. McCoy has been for years the steadfast friend of all these gentlemen, and has of their works and of many other artists, principally American, an excellent collection of more than fifty pictures. Of the late William H. Rinehart, the distinguished sculptor, Mr. McCoy was a steadfast friend for nearly twenty years. Mr. McCoy wrote, in 1858, for a daily newspaper in Baltimore, the first line of editorial commendation Rinehart's work ever received anywhere. This earnest article brought the sculptor and his work first before the public, and, as year after year added fresh proofs to Rinehart's genius, it was the pen of Mr. McCoy that uniformly and continually introduced them to the intelligent favor of his fellow-citizens. Rinehart's incomparable *chef d'œuvre*, the marble statue of "Clytie," having been brought by him to Baltimore, where Rinehart earnestly wished it to remain, as the very best work he had ever made or was capable of. The figure was about to leave the city, as the property of an owner living out of Maryland, when Mr. McCoy promptly stepped forward, bought it at the artist's own price, and presented it, in an appropriate setting, to the perpetual care of the Peabody Institute, as a noble work of of art for free exhibition in Baltimore forever. Mr. McCoy has since bought and shown freely to the public an admirable bust of Christ, by the American sculptor, Ezekiel, now residing in Rome. All the odds and ends of time Mr. McCoy could command in the past three years, have (amid a pressing mass of business every day), been devoted to building up his private library, which is now not only one of the most extensive in Baltimore in point of volumes, but by far the fullest of any private library here in the elements of English and American history, in general philosophy, in illustrated topography, in natural science, and in the history and productions of the fine arts. His collections of American, English, French, German, and Italian engravings, representing pictures, statuary, and gems, is without a local rival, and is the result of years of careful labor backed by the cultivation necessary to such a task. Mr. McCoy is descended, on his mother's side, from John Williamson and Jane Parker, his wife, both of families long established in the North of Ireland; whence the Williamsons came to America during the Irish political troubles in 1795, and settled in Baltimore in 1797. On his father's side, Mr. McCoy is descended from Gowan McCoy, a Scotsman, who, in 1709, settled in Northern New Jersey, at that time a wilderness; then, in the next generation, from Gowan McCoy (second), of Basking Ridge, who commanded a troop of New Jersey horse in the Revolution; then, in the next generation, through Thomas McCoy (a Revolutionary soldier of the line), and Phœbe Cary (of Somerset, N. J.), his wife. These were the parents of Stephen McCoy, the father of John W. Mr. McCoy is now in full health in spite of forty odd years of almost unbroken work; he has an easy but not extravagant fortune; lives simply; is glad to join in all good endeavors for the public welfare; gives the larger part of his time now to public duties; is content with his lot; glad to help his fellows; fond of his friends; proud to see the city of his birth growing in power; much more proud to see her people growing in cultivation; and with a cheerful philosophy, is ready to meet whatever duty or whatever event the coming years have in store for him.

During the last years of his life Mr. McCoy was a great invalid. He sought relief by travel, by rest, and by regard for professional advice—but without avail. At length, after years of suffering, the end came in Baltimore, August 20, 1889. His body was buried in Greenmount Cemetery, Baltimore.

A bust of Mr. McCoy by Keyser and a portrait by Oscar Hallwig may be seen in the Peabody Institute. The works of art given by him to the Institute, are now in its gallery of art.

Extracts from his will are given in the Fifteenth Annual Report of the President of the University.

The McCoy Library.

The following statement in regard to the McCoy Library is reprinted from the Sixteenth Annual Report of the President of the University.

The collection is especially rich in works treating of Art and Archæology, the history of the various great schools of Art, lives of eminent artists, and in particular, in magnificent folios of engravings, reproducing the masterpieces of the great art-galleries of Europe. Among these are represented the Pitti Palace and Medicean Gallery of Florence, the Palais Royal of Paris, and the Royal Galleries of Dresden, Munich, Madrid, Versailles, the Hague, Turin, the Museo Borbonico of Naples, the British Museum, the galleries of the Vatican and the Campidoglio of Rome, the Vernon Gallery, the works of Raphael, Leonardo da Vinci, Albert Durer, Holbein, etc.

More modern schools of art are represented in a collection of large folios, illustrating the works of Rubens, Rembrandt, Reynolds, Canova, Thorwaldsen, Delaroche, Turner, and other great artists.

In the department of Archæology are found the twenty volumes of the *Trésor de Numismatique*, Du Sommerard, *Les Arts du Moyen Age*, Meyrick's *Ancient Armour*, Hamilton's engravings from ancient vases, Owen Jones's *Alhambra*, and many other works of great value.

The valuable and rare books in the department of English Literature form a most useful and acceptable addition to the working library of the University, but are too numerous to be specified. We may mention, however, the publications of the Camden and Percy Societies, the Fuller Worthies Library, the Bohn Libraries, and a fine collection of the English dramatists.

In Americana this library is especially rich, containing many books printed in New England in the seventeenth and early eighteenth centuries; also a valuable collection of books and pamphlets in thirty-six volumes, relating to the American Revolution. A particularly desirable accession to our shelves is found in the large number of books, many of them of great rarity, treating of the history, and especially the early history, of the Southern States.

The number of volumes in the McCoy Library is eight thousand.

The volumes relating to art, archæology, travels, etc., have been retained in the room where Mr. McCoy left them, No. 350 W. Lanvale St. This room is open daily from 3 to 5 p. m. Admission is by card. Dr. H. W. Magoun is the special custodian of this collection.

REPORT OF THE MARINE LABORATORY: SESSION OF 1891.

Reprinted in part from the Sixteenth Annual Report of the President of the University.

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Early in May, 1891, some of the members of our party went to Jamaica, which had been selected as our field of work for the season, while others joined us later on. The party consisted of fifteen persons, including the Director.

After a preliminary exploration of different seaports, we selected Port Henderson as our station. This is a seaside resort in Kingston Harbor, opposite Port Royal, and about nine miles by water from Kingston. Here we found two partially furnished houses suitable for a laboratory and lodgings, and we rented and occupied them for about fourteen weeks, from May 26th to September 1st.

The establishment of a party in a new home at a remote point in a strange country is a task which, in the mid-summer climate of the tropics, is most severe and exhausting. Of this, I was entirely relieved by Dr. Morgan and Mr. Bigelow, who themselves attended to all the preliminary work with great efficiency, and I take this opportunity to thank them for their willing help, which contributed in no small degree to the success of our expedition.

Our summer was devoted, in great part, to the collection and preservation of material for embryological work at home, and, as the members of the party are still employed in preparing and studying it, the results are not yet far enough advanced for reporting. There are a few noteworthy points of interest, however. Among them are the following:

Soon after we settled at Port Henderson, Mr. Field found near our laboratory in an enclosed lagoon of dense salt water, a very remarkable rhizostomatous medusa belonging to the genus Cassiopea. No species of this genus, as limited by Haeckel, has heretofore been found anywhere in the Atlantic. It is a South Pacific form, and the known species are from this region or from the Indian Ocean and the Red Sea. A species of a closely related genus, Polyclonia frondosa, was found by L. Agassiz on the coast of Florida, and was referred by him to the genus Cassiopea, although it is not a true Cassiopea. Polyclonia frondosa is found in Jamaica also, and we obtained specimens in Port Royal Harbor. It is also found in the Bahamas, and Professor H. V. Wilson has given to me the notes and drawings which he made from specimens which he obtained at Green Turtle Kay.

The medusa which we found at Port Henderson is not a Polyclonia but a true Cassiopea, and the only one as yet found in the Atlantic. As it is very abundant and conspicuous, its escape from the notice of naturalists for such a long time is remarkable, for it is so well known to the negro fishermen of Jamaica that they have a name for it—the Guinea Corn Blubber. As it is one of the most common and characteristic marine animals of these waters, I have proposed to call it, after the Indian name of the island, Cassiopea Xamacha. While it is able to swim slowly by the pulsations of its bell, it is usually found fixed upon the smooth chalky bottom by the flat sucker-like surface of its exumbrella, and in some places the bottom was so completely covered with them that their circular discs were actually touching each other, while the interspaces were filled in by smaller specimens.

Our knowledge of the life history of the rhizostomatous medusae is very incomplete, and is based entirely upon the study of the Mediterranean *Colytorhiza tuberculata*, a species which belongs to a more specialized division of the group than Cassiopea, although it was formerly called Cassiopea Borbonica. Many fundamental points in the development of the rhizostomes, and in fact, of the Discomedusae in general, are still in dispute, and at my suggestion Mr. Bigelow undertook to trace the life history of our Cassiopea, a line of research for which the studies which he has pursued for nearly three years under my direction, on the structure of Discomedusae, rendered him well qualified. He found the larvae of Cassiopea on marine plants among the adults, and as these lived in captivity and set free peculiar planula-like buds, which also lived and grew in small aquaria in the house, he was able to obtain a fairly complete series of young stages. The most interesting results of his study of the living larvae, are the discovery of this peculiar method of budding, and the settlement of the question as to the origin and homology of the sense organs of adult Discomedusae, which he has proved to be the modified basal portions of certain tentacles of the attached larvae. This is supplementary to, and an amplification of, Mr. Bigelow's former work on the development of the sense organs in other groups of medusae. While at Port Henderson he watched the larvae undergo their metamorphosis, and he made drawings from life of the important stages. He is now completing his work by the study of serial sections of the larvae, and of the organs of the adult. This work, which is now well under way, gives promise of results of very great interest, and I regard it as a very noteworthy piece of work, as it will be, when completed and published with ample illustrations, a permanent and valuable addition to our knowledge of the medusae.

As I had hoped to find Chiton with eggs, Mr. Metcalf went to Jamaica prepared to study its development. We found several species of Chiton in great abundance on the rocks at Port Henderson, close to our laboratory. Within a few hours after his arrival he obtained the eggs, and soon had a series of larvae, at all stages of development, living in the house in small aquaria. He devoted the season to the study of the living larvae, and to the preservation of material for sections. He is now continuing the work at our laboratory in Baltimore, and he has constructed a series of enlarged models from his sections, to exhibit the process of segmentation of the egg of Chiton.

We found ourselves well placed at Port Henderson for studying the Termites, or so-called *white ants*, and Mr. Knower, who had at my suggestion prepared himself for this work before leaving Baltimore, spent his summer in observing their habits, and in collecting the eggs and larvae, as well as the adults of the different castes. He preserved a fine collection of these specimens, for embryological and anatomical work, and he is now engaged in the prosecution of this portion of his research.

Mr. Field continued at Port Henderson the study of the embryology of Echinoderms, upon which he has been engaged for two years past, and he added to his collection the eggs and larvae of a number of forms of which he previously had no representation.

Mr. Morgan spent a great deal of his time in gathering and studying material bearing on the problem of metamerization in animals, and in this connection he collected the adults and embryos of Chiton, Ophiurans, &c. He also obtained at several places in the interior of the island a number of eggs from a species of tree frog, which has no tadpole stage, but hatches from the egg as a little frog. Some of these were kept in the laboratory in wet moss until they hatched, while others were preserved at successive embryonic stages. He was so fortunate as to obtain a very complete series of stages, and inasmuch as its development has never been studied, there is every reason to hope that most valuable results will be obtained by the thorough study of this material.

Some ten years ago I found at Beaufort an interesting Crustacaean, Lucifer, whose metamorphosis is most remarkable and instructive. I obtained a few eggs, and reared the newly hatched larvae, and traced the metamorphosis with exhaustive minuteness from the time of hatching to maturity; and my results, with ample illustrations, were presented to the Royal Society of London by Professor Huxley, and were published in the *Philosophical Transactions.* This work, which was among the first fruits of our marine laboratory, is now embodied in all the standard text books.

I was not able, at Beaufort, to obtain enough eggs of Lucifer to study the embryology, although the few which I did find showed that this part of its life history is fully as important as the metamorphosis. I have been upon the watch ever since for a chance to obtain a supply of eggs, in order to supplement my first memoir on the metamorphosis by a second on the embryology; but while I have occasionally found Lucifer with eggs, out at sea, I have had no opportunity to study it, as the preparation of the material presents such difficulties that it cannot be carried on at sea. The adult animals are so small that they are almost invisible, and the eggs, which are microscopic, are so loosely attached and so delicate, that they are lost in the act of capturing the adults. I was greatly pleased to find Lucifer in abundance, and by going out in a boat and collecting the adults with great care, and taking them carefully home, I was so fortunate as to find some thirty or forty with eggs, and these I kept in aquaria long enough to obtain a tolerably complete series of stages in the embryonic development. I am now engaged in the study of this material, and I hope to have an account of the embryology of Lucifer completed within a year. My success in obtaining these eggs is an ample return for the expedition to Jamaica.

* * * * * * * * * * * *

W. K. Brooks,
Director of the Marine Laboratory.

RECENT PUBLICATIONS.

The following list enumerates recent publications by those who have been or are now members of this University. It is printed for the information of their colleagues and friends, and is not supposed to be complete. The last previous list is given in *University Circulars*, No. 90. Papers in the *University Circulars* and *Hospital Bulletins* are not here noted.

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THE DEATH OF MR. FRANCIS T. KING.

Mr. Francis T. King, one of the Trustees of the Johns Hopkins University and the President of the Board of Trustees of the Johns Hopkins Hospital, died after a brief illness, in Baltimore, December 18, 1891.

I.

Biographical Sketch.

(Compiled from various sources.)

Mr. Francis Thompson King was born in Baltimore February 25, 1819;—his father being Joseph King, Jr., an Englishman who came to this city in 1816, and was here engaged as a shipping merchant until 1831;—and his mother being Tacey, the daughter of Elias Elicott, a descendant of the founders of Ellicott City.

Mr. Francis T. King was a student for two years of St. Mary's College, Baltimore, and afterwards of Haverford College, Pa. He then engaged in mercantile pursuits, first in the house of Janney, Hopkins, and Hull, importers and jobbers of dry goods; and subsequently as a partner in the firms of Plummer and King, importers of hardware; Bangs and King, dry goods commission merchants; and King and Carey, wholesale shoe dealers.

In 1846 he was married to Elizabeth G. Tabor of New Bedford, Mass., who died in 1856, leaving three daughters. Soon after her death he retired from active business, but continued to be interested in various financial operations. He was President of the Central Savings Bank, which he had helped to organize in 1854. He was also a director or manager in many other corporations. Among these positions was that of a director in the Baltimore and Ohio Railroad, as a representative of the city, in 1860–1, and again in succession to Johns Hopkins, for several years after 1873. He was also the executor of several large estates. During four years he was a member of the Water Board.

He gave, however, to religious and philanthropic duties a still greater portion of his time and energy, and was constantly called upon by his friends and fellow citizens for counsel and assistance. In the Orthodox Society of Friends he was an elder, and for more than twenty years presiding officer or clerk of the Baltimore Yearly Meeting. For many years he was President of the Maryland Bible Society and Vice-President of the American Bible Society. He was a trustee of the Samuel Ready Asylum, Baltimore, of Guilford College, N. C., and of Haverford College, Pa., and President of the Trustees of Bryn Mawr College. He was also an active supporter and one of the trustees of the Young Men's Christian Association.

The late Johns Hopkins selected him as a Trustee of the Hospital and of the University, and named him as President of the Trustees of the first of these corporations. The amount of time, labor, and thought which Mr. King devoted to the Hospital is partly set forth in the following minute. To the University he subscribed in 1889, the sum of five thousand dollars. Of the Hospital he was not only the President but the Chairman of the Building Committee, and to his personal attention the plans of the Hospital structure are largely due. He made many journeys in this country in order to study the working of kindred establishments. Twice he visited Europe for a similar purpose and at the International Medical Congress in London he had the unusual distinction of being admitted as a layman to the meetings of the profession. The care of the hospital affairs occupied him closely to the very end of his days.

Mr. King also took an active part in the organization and administration of the trusts established by Thomas Wilson. One of these is a sanitarium for young children, of which he was President, and the other is an agency for supplying fuel and sewing machines at moderate prices to poor and deserving women.

Among the public addresses which he made perhaps the most important is that delivered at the opening of the Hospital in 1889.

II.

United Action of the Hospital and University.

The Board of Trustees of the Johns Hopkins Hospital, the members of its medical staff and others in its service, the Trustees of the Johns Hopkins University, its President and Professors and others connected with it, met in the Library of the Hospital on Saturday, December 19, 1891, at 4 o'clock p. m.

Mr. William T. Dixon, Vice-President of the Hospital Trustees, took the chair, and Mr. George W. Corner acted as secretary of the meeting.

Mr. Francis White presented the following minute, which was unanimously adopted:

"Those who are here assembled as representatives of the Johns Hopkins Hospital and of the Johns Hopkins University have heard, with great sorrow, the announcement of the death of Francis T. King, the late President of the Board of Hospital Trustees and one of the University Trustees.

"His counsel and opinions largely influenced Johns Hopkins to procure the incorporation of the Johns Hopkins Hospital, and to set apart, by his will, a large portion of his estate for its endowment.

"He was made President of the Hospital Board when it was first organized, at the request of our founder, and he remained President of the Board from that period until his death.

"He was a member of the University Board of Trustees from its organization until yesterday.

"We are witnesses of his unselfish devotion to the duties of these trusts from the day he assumed them until the last day of his life.

"While this hospital building in which we are assembled is an enduring monument to the charity of the founder, it will also perpetuate the memory of the late President of the Hospital Board; for all men know that the growth and development of this Hospital have been largely due to the patient and untiring care with which he, from the beginning, watched over all its interests and concerns.

"He was our personal and familiar friend. He was endeared to all engaged in the service of the Hospital and University by his unceasing courtesy, Christian life, and earnest desire to promote the usefulness and welfare of all who were brought into contact with him.

"We desire to express to his family our deep sympathy with their loss. They have, however, the consolation of knowing that he closed a well-spent life in the evening of his days, honored and respected, not only in this community, but in the many sections of the country to which his zeal in good works had extended his influence.

"This minute shall be entered among the proceedings of the Hospital Trustees and of the University Trustees. It shall be published in such newspapers as the chairman of this meeting may select, and a copy of it, attested by the chairman and secretary of this meeting, shall be sent to the family of the deceased."

Brief addresses were made by Mr. William T. Dixon, Vice-President of the Hospital; Mr. C. Morton Stewart, President of the Board of Trustees of the University; Dr. John S. Billings, formerly Medical Adviser to the Hospital; Dr. D. C. Gilman, President of the University; Dr. Henry M. Hurd, Superintendent of the Hospital; and Dr. James Carey Thomas. These addresses are printed in the *Hospital Bulletin*, No. 19, for January, 1892.

III.

Remarks on behalf of the University by Daniel C. Gilman.

Eighteen years have gone since the founder of these two institutions was taken away and his generous purposes were made public. Six years previous, the two boards of trustees were legally incorporated. But earlier still, Francis T. King was associated with Johns Hopkins in the formation of plans for the bestowal of that princely fortune by which the University and the Hospital were created. We may, therefore, say that the friend whom we now honor has devoted twenty-five years—almost a generation—to the service of these noble trusts. A remark of Mr. King (I have been told) had great weight with our founder. "There are two institutions," he is reported to have said, "which will never die, a University and a Hospital; for there will always be the youth to educate, and the sick and suffering to relieve."

The sagacity of Mr. Hopkins was shown in his selection of trustees, and as one after another they are called away, we may bring to mind the services that each has rendered, and trace the influence that each has exerted in forming, upholding and strengthening two great institutions. To the Hospital our departed friend gave his chief attention; but he was likewise a faithful member of the University board. If I were to say that in the seat of learning for which I am speaking he was faithful, attentive, enlightened, efficient and unselfish, I should only employ the terms which are appropriate to the entire board. These are fundamental virtues without which there would be no confidence. But Mr. King was more than this. His personality included characteristics that belonged to him and to no one else. Those who met him in the academic walls will always remember that serene manner, that pleasant smile, that kindly voice, that friendly pressure of his hand. But with this gentleness—enthusiasm, cheerfulness, buoyancy and hope were closely associated. His hospitality was freely extended to us. In an emergency he came generously to the University's support. But he had still higher qualities, for he was governed by lofty ideals. No one saw more clearly than he, even before a brick was laid in its place or an officer called into service, the possibilities of these foundations. He delighted to imagine and foretell the good that would come to this city, this State, this region, this country, and the world, from the influences here exerted "for the advancement of knowledge and the relief of suffering." His was the charity that "hopeth all things."

Few were equal to him in two different qualities—interest in minute details and appreciation of broad principles. He was remarkable for intellectual receptivity. His were not the habits of a scholar, poring over the experience of the world as recorded in books; nor those of a professional man familiar with the literature of a great science; he was not trained in the modern methods of inquiry and research; but he was a man living constantly among men, who had the rare sagacity to discover who knew what he wanted to know, and the still rarer ability to ask those questions which would elicit the desired information. All that he thus learned he made his own, and he gave it out freely to others. It was not as light reflected from a mirror; it was rather as oil in a lamp, which made a burning flame the brighter. He was rare in his spirit, rare in his energy, rare in his influence and success, rare in his power of doing good, rare in his qualities as a citizen and friend.

Those who are called upon to organize great institutions become to a certain extent identified with them, and long after Mr. King has gone these buildings will represent his thoughts and plans. But as these structures outlive his personality, so the great ideas which underlie them will outlive the piles of brick and mortar. "There will always be the youth to educate and the sick and suffering to relieve."

The last speaker reminded us that our departed friend had lived beyond his expectations to see the reality of his hopes. He saw the University strong in numbers and in influence; he saw the Hospital engaged in its beneficent mission with the most gratifying results; and then he was ready to depart. This brings to mind the story of the Venerable Bede as told by Aubrey de Vere. Bede first rendered into English the Gospels of Our Lord, and died as he finished the Gospel of St. John. "Still one verse remains," his young disciple said. The master answered, "Write, and write with speed," and dictated. The young man wrote, then said, "'Tis finished now." And so the Saxon saint "passed to the heavenly kingdom." Like Bede, our friend has seen his life-work finished and has gone to his reward.

PROCEEDINGS OF SOCIETIES.

Scientific Association.

December 16, 1891.—One hundred and first regular meeting. Dr. H. N. Morse in the chair.
On the Possible Relations of a University to Meteorology, by Professor CLEVELAND ABBE, of the U. S. Weather Bureau.
Remarks by President GILMAN, Professor ROWLAND, Dr. MORSE, and Dr. CLARK.
January 20, 1892.—One hundred and second regular meeting. Dr. H. N. Morse in the chair.
A Visit to the Grand Cañon of the Colorado, by Mr. CHARLES D. WALCOTT, Chief Geologist of the U. S. Geological Survey.

Philological Association.

December 18.—One hundred and fourteenth regular meeting. Professor Gildersleeve in the chair. Forty-four members present.
On Recent Methods in the Study of the Vedas, by M. BLOOMFIELD.
On the So-Called Songs of Degrees, by D. G. STEVENS. (*See p.* 40.)
January 15.—One hundred and fifteenth regular meeting. Professor Gildersleeve in the chair. Forty-six members present.
Goethe's Elpenor, by H. WOOD.
An Explanation of the *i* in Modern French *lieu* = Latin *locum*, by J. E. MATZKE.

Historical and Political Science Association.

Meetings from December 18 *to January* 15.—Professor H. B. Adams in the chair.
Nathaniel Holmes Morison, First Provost of the Peabody Institute, by H. B. ADAMS.
Higher Education in Tennessee, by L. S. MERRIAM.
The History of Our National Wealth as presented by the Tenth Census, by F. C. WAITE.
University Settlements in New York, by P. J. MOSENTHAL.
The Ancient Hebrew Family, by A. P. WINSTON.

Mathematical Seminary.

December 23.—
A Fundamental Theorem of the Theta Functions, by T. CRAIG.
On the Life of Halphen, by G. O. SQUIER.
On the Life of Poisson, by N. A. PATTILLO.
January 6.—
On the History of Curvature, by J. L. LAKE.
On the Life of Madame Kowalevski, by Miss C. C. BARNUM.
January 13, 1892.—
The Curvature of a Twisted Curve in Space, by C. H. CHAPMAN.
On Certain Resultants, by J. M. WILLARD.
January 20.—
On the Lives of Rosenhain and Göpel, by E. P. MANNING.
The History of π, by H. A. BUMSTEAD.
January 27.—
The History of π resumed, by H. A. BUMSTEAD.
Arithmetical Operations of the Greeks, by E. P. MANNING.

Baltimore Naturalists' Field Club.

January 13.—
The Construction of Topographical Maps, by JOSIAH PIERCE.

Young Men's Christian Association.

October 18.—Address on the Influence of St. Paul upon the Development of Christianity, by Professor GRIFFIN.
October 25.—Address on Christianity as a Life and as a Doctrine—the Epistles to the Corinthians, and the Epistles to the Galatians and Romans, by Professor GRIFFIN.
November 1.—Address on the Influence of Coleridge on Modern Christian Thought, by President GILMAN.
November 15.—Address on the Epistles of the Imprisonment, by Professor GRIFFIN.
November 17.—Election of Officers to fill vacancies resulting as follows: *Vice-President*, Mr. W. A. HARRIS; *Recording Secretary*, Mr. W. F. GALLAWAY; *Member of Council*, Mr. W. H. MALTBIE; *Librarian*, Mr. D. E. ROBERTS.
November 22.—Address on Mr. Neesima—the Japanese Christian, Student and Patriot, by Mr. M. ISHIZAKA.
December 1.—Monthly Business Meeting. President M. D. Learned in the chair. Reports of Committees read. Organization for Christian work discussed.
December 20.—Address on Sewall the Historian of the Society of Friends, by Dr. H. WOOD.
January 12.—Annual Business Meeting and Election of Officers as follows: *President*, Dr. M. D. LEARNED; *Vice-President*, Mr. J. A. JAMES; *Corresponding Secretary*, Mr. A. M. CARROLL; *Recording Secretary*, Mr W. F. GALLAWAY; *Treasurer*, Mr. F. F. ALMY; *Curator*, Mr. D. E. ROBERTS; *Members of the Executive Council*, Professor G. H. EMMOTT, Messrs J. W. YOUNG, H. W. SMITH and C. W. BUMP.

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